

University of Maine at Augusta
Kennebec County
Augusta, Maine
A-602-71-F-M

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**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. University of Maine at Augusta (UMA) was issued Air Emission License A-602-71-E-R on August 22, 2000 permitting the operation of emission sources associated with their Augusta, Maine educational facility.
2. UMA has requested a minor revision of their air emissions license to reflect the addition of two new boilers rated at 1.5 MMBtu/hr each to be located in the new Student Center Building heating plant.

B. Emission Equipment

UMA is applying to include the operation of the following equipment to its air emissions license:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1A	1.5	10.8	#2 Fuel oil, 0.5%	1
Boiler #1B	1.5	10.8	#2 Fuel oil, 0.5%	1

C. Application Classification

A modification at a facility with a licensed emissions increase of under (4) four TPY for any one regulated pollutant and under (8) eight TPY for total pollutants is determined to be a minor revision and not a major or minor modification. This amendment is determined to be a minor revision and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. New Boilers

UMA plans to make use of two new #2 fuel oil fired boilers to be designated Boiler #1A and Boiler #1B and will exhaust to Stack #1. Boiler #1A and Boiler #1B will be located in the new Student Center Building heating plant and will be utilized primarily to satisfy heat and hot water needs.

UMA's current air emission license (A-602-71-E-R) established a total annual facility #2 fuel use limit of 600,000 gallons per year. UMA has not proposed and does not expect that an increase in their licensed annual #2 fuel usage limit will be necessary, therefore there is no increase in the facility's total potential annual emissions from those given in the facility's current air emission license.

UMA's current air emission license (A-602-71-E-R) establishes a BPT sulfur content for #2 fuel oil at no greater than 0.5% sulfur by weight for the facility. Because the two new boilers are considered new equipment, an application of BACT is required for the new boilers. Ordinarily, BACT for new or modified #2 fuel oil-fired equipment is the requirement of the use of #2 fuel oil with a sulfur content of no greater than 0.35% sulfur by weight. In this case, the Department shall consider BACT satisfied with the currently licensed requirement of the use of #2 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight, applied to the two new boilers for the following reasons:

1. UMA maintains a contract for oil delivery. If this minor revision were to establish a sulfur limit of no greater than 0.35% sulfur by weight for the new boilers, UMA would be required to either establish a separate contract for fuel delivery for the new boilers or establish a new contract for fuel oil with a lower sulfur fuel for all the boilers. This would cause undo time and monetary expense to the facility.

2. The current license already establishes annual SO₂ emissions for UMA based on the current total annual fuel oil usage limit of 600,000 gallons per year. UMA is not requesting that the currently licensed total annual fuel usage limit be changed as a result of this minor revision, therefore there would be no net decrease in allowable SO₂ emissions that would result in requiring UMA to fire 0.35% sulfur fuel in the two new boilers.

A summary of the BPT analysis for Boilers #1A and #1B is as follows:

1. PM and PM₁₀ limits are derived from Chapter 103, however BACT is stricter. BACT shall be 0.08 lb/MMBtu for PM and PM₁₀.
2. SO₂, NO_x, CO, VOC emissions rates are based on AP-42 emission factors for boilers of less than 100 MMBtu/hr dated 9/98.
3. BPT for #2 fuel oil sulfur content is no greater than 0.5% sulfur by weight.
4. Visible emissions from the new boilers shall not exceed 20% opacity on a six-minute block average.

C. Annual Emission Restrictions

- This modification does not include a fuel cap adjustment, therefore no change in potential annual emissions will occur.

<u>Pollutant</u>	<u>Tons/Year</u>
PM	5.1
PM ₁₀	5.1
SO ₂	21.4
NO _x	7.8
CO	1.9
VOC	0.6

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non major source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. An air quality analysis is not required for this amendment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Minor Revision A-602-71-F-M, subject to the conditions found in Air Emission License A-602-71-E-R and to the following conditions:

The following are new conditions to Air Emissions License A-602-71-E-R

(21) New Boilers #1A and #1B

- A. UMA shall fire #2 fuel oil with a sulfur content not to exceed 0.5% sulfur by weight in Boilers #1A and #1B. [MEDEP Chapter 115, BACT]
- B. Fuel use in the new boilers shall be included in the facility fuel use records maintained on a monthly and twelve-month rolling total basis. [MEDEP Chapter 115, BACT]
- C. Emissions from the new boilers shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
New Boiler #1A	lb/hr	0.12	0.12	0.77	0.03	0.05	0.006
New Boiler #1B	lb/hr	0.12	0.12	0.77	0.03	0.05	0.006

[MEDEP Chapter 115, BACT]

- D. Visible emissions from the new boiler stack shall not exceed 20% opacity on a six-minute block average, except for no more than 1 six-minute block average in a 3-hour period. [MEDEP Chapter 101]

(22) UMA shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C). [38 MRSA §605-C]

(23) UMA shall pay the annual air emission license fee within 30 days of September 30 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA §341-D, Subsection 3. [38 MRSA §353-A]

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(24) This amendment shall expire concurrently with Air Emission License
A-602-71-E-R. [MEDEP Chapter 115]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: **October 29, 2003**

Date of application acceptance: **October 31, 2003**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality